IN THE CLAIMS

Claims 1, 12, 22, 23 and 25 are amended as follows without prejudice or disclaimer of the subject matter thereof.

1. (Currently Amended) A method of using electrical signals originating in an individual's brain and terminating at an impaired muscle to rehabilitate individuals with motor deficiencies comprising:
   (a) prompting the individual to attempt to contract an impaired muscle using electrical signals originating in the individual's brain;
   (b) detecting an electrical signal within the impaired muscle generated by the individual's attempt to contract, using electrodes placed on the individual's skin near the impaired muscle;
   (c) transmitting the electrical signal to a microprocessor;
   (d) checking the pattern of the electrical signal against a mathematical algorithm;
   (e) determining whether or not an attempt to move the impaired muscle has been made by the patient;
   (f) measurin g the strength of the electrical signals; and
   (g) sending an electric current to an electrode in contact with the individual's skin to cause a muscle contraction if the strength of the electrical signal is larger than a first threshold value.

2. (Original) The method of claim 1 further comprising the step of displaying the strength of the electrical signal on a visual display.

3. (Original) The method of claim 1 further comprising the step of setting a second threshold value higher than the first threshold value if the first threshold value is reached in a prior attempt to move the impaired muscle.

4. (Original) The method of claim 1 further comprising the step of setting the second threshold value lower than the first threshold value if the first threshold value is not reached in a prior attempt to move the impaired muscle.

5. (Original) The method of claim 1 further comprising the step of maintaining the threshold value unchanged.

6. (Original) The method of claim 1 further comprising the step of prompting the individual to relax said impaired muscle.

7. (Original) The method of claim 1 wherein a prompt is in the form of a sensory cue.

8. (Original) The method of claim 7 wherein the prompt is in the form of a visual cue.

9. (Original) The method of claim 7 wherein the prompt is in the form of an auditory cue.

10. (Original) The method of claim 1 further comprising the step of recording the data received and transmitted by said microprocessor.

11. (Original) The method of claim 1 further comprising the step of reducing electrical noise by incorporating a floating, amplified grounding device.

12. (Currently Amended) A muscular therapy device comprising:
    (a) at least two sensors for detecting electrical signals originating in the individual's brain and terminating at an impaired muscle ~~within a muscle~~ said signals generated by an individual's attempt to move the muscle;
    (b) said sensors in physical contact with a portion of skin near the muscle;
    (c) said sensors in electrical contact with a microprocessor;
    (d) said microprocessor capable of deciphering from a pattern of said electrical signals whether or not an attempt to move said muscle has been made;

(e) said microprocessor capable of communicating with a display device;

(f) said microprocesso r capable of setting a threshold value after every attempt to move the muscle;

(g) said threshold value used to determine when the strength of said attempt is sufficient to warrant a reward; and

(h) said reward in the form of an electrical current sent from said microprocessor to said sensors for causing a visible muscle contraction.

13. (Previously Presented) The muscular therapy device of claim 12 wherein said microprocessor produces an auditory cue.

14. (Previously Presented) The muscular therapy device of claim 12 further comprising a memory means for storing information obtained by said microprocessor.

15. (Previously Presented) The muscular therapy device of claim 12 wherein the sensors cover an area of skin measuring about 1 to 4 square inches.

16. (Previously Presented)The muscular therapy device of claim 12 wherein the microprocessor is capable of communicating with a display device.

17. (Previously Presented)The muscular therapy device of claim 16 wherein the display device is angled toward a user when the user is in a reclined position.

18. (Previously Presented)The muscular therapy device of claim 12 wherein the sensors can detect electrical impulses of about 0.2 to about 2000 μV.

19. (Previously Presented)The muscular therapy device of claim 12 wherein the microprocessor is capable of analyzing at least 3,000 signals per second.

20. (Previously Presented)The muscular therapy device of claim 12 further comprising a floating, amplified grounding device for reducing electrical noise in an EMG input of the device.

21. (Original) An improvement to a muscular therapy device, the improvement comprising:
(a) means for detecting electrical impulses of about 0.2 to about 2000 μV; and
(b) means for sampling an electrical signal at least 3000 times per second.

22. (Currently Amended) A method of using electrical signals originating in an individual's brain and terminating at an impaired muscle to rehabilitate individuals with motor deficiencies comprising:
(a) prompting the individual to attempt to contract an impaired muscle using electrical signals originating in an individual's brain;
(b) detecting an electrical signal within the impaired muscle generated by the individual's attempt to contract, using electrodes placed on the individual's skin near the impaired muscle;
(c) transmitting the electrical signal to a microprocessor;
(d) checking the pattern of the electrical signal against a mathematical algorithm;
(e) determining whether or not an attempt to move the impaired muscle has been made by the patient;
(f) measurin g the strength of the electrical signals;
(g) sending an electric current to an electrode in contact with the individual's skin to cause a muscle contraction if the strength of the electrical signal is larger than a first threshold value;
(h) detecting electrical impulses of about 0.2 to about 2000 μV;
(i) analyzing at least 3,000 signals per second; and
(j) utilizing a floating, amplified grounding device for reducing electrical noise.

23. (Currently Amended) A muscular therapy device comprising:

(a) at least two sensors for detecting electrical signals originating in the individual's brain and terminating at an impaired muscle ~~within a muscle~~ said signals generated by an individual's attempt to contract the muscle;

(b) said sensors in physical contact with a portion of skin near the muscle;

(c) said sensors in electrical contact with a microprocessor;

(d) said microprocessor capable of deciphering from a pattern of said electrical signals whether or not an attempt to move said muscle has been made;

(e) said microprocessor capable of communicating with a display device;

(f) said microprocesso r capable of setting a threshold value after every attempt to move the muscle;

(g) said threshold value used to determine when the strength of said attempt is sufficient to warrant a reward;

(h) said reward in the form of an electrical current sent from said microprocessor to said sensors for causing a visible muscle contraction;

(i) said sensors detecting electrical impulses of about 0.2 to about 2000 μV;

(j) said microprocessor capable of analyzing at least 3,000 signals per second; and

(k) a floating, amplified grounding device for reducing electrical noise.

24. (Original) A method for improving the sensitivity of a muscular therapy device, said improvement comprising:

(a) providing means for detecting electrical impulses of about 0.2 to about 2000 μV; and

(b) providing means for analyzing at least 2500 signals per second.

25. (Currently Amended) A method of using electrical signals originating in an individual's brain and terminating at an impaired muscle to rehabilitate individuals with motor deficiencies comprising:

(a) prompting the individual to attempt to contract an impaired muscle using electrical signals originating in the individual's brain;

(b) detecting an electrical signal within the impaired muscle generated by the individual's attempt to contract, using electrodes placed on the individual's skin near the impaired muscle;

(c) transmitting the electrical signal to a microprocessor;

(d) checking the pattern of the electrical signal against a mathematical algorithm;

(e) determining whether or not an attempt to move the impaired muscle has been made by the patient;

(f) measurin g the strength of the electrical signals;

(g) sending an electric current to an electrode in contact with the individual's skin to cause a muscle contraction if the strength of the electrical signal is larger than a first threshold value; and

(h) electronically adjusting the threshold value according to a mathematical algorithm.